

UNITED STATES OF AMERICA

PROPOSAL FOR THE WORK OF THE CONFERENCE

2000 WORLD RADIOCOMMUNICATION CONFERENCE PREPARATION	IWG9/28 Rev. 2 DATE: December 3, 1998
---	--

Proposal for Agenda Item 1.8

to consider regulatory and technical provisions to enable earth stations located on board vessels to operate in the fixed-satellite service (FSS) networks in the band 3 700 - 4 200 MHz and 5 925 – 6 425 MHz, including their coordination with other services allocated in these bands.

Background Information:

Global wide-band communication with vessels is possible by using existing satellite transponders of the fixed-satellite service (FSS) and satellite tracking earth stations mounted on stabilized platforms which compensate for the pitch and roll of a moving vessel. Fixed-satellite service communications in the 3 700-4 200 MHz and 5 925-6 425 MHz bands can provide global coverage without resorting to multiple spot beams that are necessary at higher frequencies. This means of communication is currently being provided on an experimental basis to ships and other vessels using FSS transponders operating in the bands 3 700-4 200 MHz and 5 925-6 425 MHz in all three ITU Regions. To achieve the primary service status of the FSS as specified in this agenda item, technical and regulatory provisions are necessary to provide for coordination of their use with other FSS use and with the fixed service (FS). Technical preparation of this item was assigned to ITU-R WP 4-9S.

There are three phases of operations to consider for the needed provisions: (i) when the vessel is stationary (*e.g.*, tied to a pier, or moored at a fixed spot in the ocean); (ii) when the vessel is in motion on the high seas; and (iii) when the vessel is in motion within the coordination distance for terrestrial microwave.

Below is text for a two-part procedural approach providing the regulatory and technical basis for WRC-2000 Agenda item 1.8. Part (A) is a footnote to modify the Table of Allocations for the bands 3 700 - 4 200 MHz and 5 925-6 425 MHz. Part (B) is a draft resolution which sets forth the terms and conditions of use.

Proposal:

(A) Modification to the Table of Allocations

MOD

Allocation to Services		
Region 1	Region 2	Region 3
3 600-4 200 MHz	3 700-4 200 MHz	
FIXED	FIXED	
FIXED-SATELLITE(space-to-Earth) ADD USA//1	FIXED-SATELLITE (space-to-earth) ADD USA//1	
Mobile	Mobile except aeronautical mobile	
5 925-6 700 MHz		
FIXED		
FIXED-SATELLITE (Earth-to-space) ADD USA//1		
MOBILE		

Reason: To establish regulatory and technical provisions for operations of earth stations on board vessels in the fixed-satellite service.

ADD:USA//1:

S5.ESV The regulatory and technical provisions to enable earth stations located on board vessels to operate in fixed-satellite service (FSS) networks in the bands 3700-4200 MHz and 5925-6425 MHz, including their coordination with other services allocated in these bands, are in Resolution ESV (WRC-2000).

(B) Draft Resolution

Draft Resolution ESV (WRC-2000)

Technical and Regulatory Provisions for the Use of Earth Stations in the Fixed-Satellite Service Located on Board Vessels in the Bands 3 700-4 200 MHz and 5 925-6 425 MHz

The World Radiocommunication Conference (Istanbul, 2000),

considering

- a) that the technology exists to permit the operation of earth stations on board vessels (ESV) in the FSS in the bands 3 700-4 200 MHz (space-to-Earth), and 5 925-6 425 MHz (Earth-to-space);
- b) that developmental operations on board vessels using such terminals and operating in the FSS networks have been conducted successfully for several years;
- c) that when such an FSS earth station of one Administration is in or near the territory of another Administration in which there are FS stations or other co-primary services coordination may be necessary;
- d) that the coordination situations for such vessels include operations:
 - (i) a certain distance from the nearest point of land beyond which no coordination is necessary;
 - (ii) stationary (in port or moored);
 - (iii) in motion within the distance in (i) from the nearest point of land;
- e) that methods exist for addressing the coordination situations in d) above,

resolves

- 1. that an earth station on board a vessel (ESV) may operate as a station in the fixed-satellite service while receiving in the 3 700-4 200 MHz band and transmitting in the 5 925-6 425 MHz band;
- 2. that operation of ESV terminals which are [XXX] km and beyond require no coordination;
- 3. that when earth stations on board vessels (ESVs) are operating in or near a port, either at a fixed position or while in motion, using the bands 3 700-4 200 MHz (space-to-Earth) and 5 925-6 425 (Earth-to-space) of the Fixed-Satellite Service, they will do so under appropriately authorized and frequency coordinated conditions as follows:
 - (a) the authority over operations on radio frequencies within XXX km of a territory while in or near a port belongs with the Administration of that territory where the port is located; however, the responsibility for the ESV lies with the Administration that initially authorized the use of the ESV;
 - (b) the responsibility for ensuring that unacceptable interference is not caused to other services in the band belongs to the Administration that authorized the use of the ESV in these bands;
 - (c) it is expected that in each port where ESVs will be operating in the FSS in these bands:

- (i) a set of frequencies will be established for such use that have been coordinated with all other co-primary users;
 - (ii) this spectrum will not include the entire allocation in these bands;
 - (iii) coordination will be accomplished between the Administration(s) with authority over the terrestrial services operating in these bands in or near that port and the Administration that authorized the ESV to operate in these bands;
 - (iv) upon completion of such coordination, the ESV will be authorized to operate in the FSS in these bands in or near the port;
 - (d) a list of the ESVs authorized to operate in and near a particular port and the frequencies and associated operational conditions¹ which have been coordinated in that port will be established and maintained by the Administration responsible for that port and such list shall include a point of contact for obtaining this information;
 - (e) ESV operators must comply with the conditions established by the authorizing Administration(s);
4. that coordination of in-motion ESV terminals within [XXX] km of territories shall be accomplished using the provisions of Annex 2 to this Resolution.

¹ Including such parameters as range of the visible geo-stationary arc, minimum elevation angle, maximum transmit e.i.r.p., etc.